

REMARKS

This Amendment is in response to the Office Action of September 13, 2005. In the Office Action, Claims 1-22 were indicated as pending, Claims 1-9 and 20-22 were indicated as withdrawn from consideration, and Claims 10-19 were indicated as rejected. With this Amendment, Claim 13 is amended, and Claims 10-19 are presented for reconsideration and allowance.

Applicant finds no record of Claims numbered 20-22, and Claims numbered 20-22 are therefore indicated to be canceled.

Claim Objections

Claim 13 was objected to as lacking an antecedent basis for "flow conditioner." With this Amendment, Claim 13 is amended to overcome the objection. Reconsideration and allowance of Claim 13, as presently amended, is therefore requested.

Claim Rejections - 35 USC § 103

Claims 10-18 were rejected under 35 USC 103(a) over Tanimura et al (US 5,052,229) in view of Khalifa (US 4,841,781). The rejection indicated that Tanimura taught the features of Claims 10, 15 except for "upstream and downstream flowtube flanges of size N," which the Examiner considered to be taught by Khalifa.

Claims 10, 15 each include limitations to "a vortex sensor shaped to fit a standard sensor interface on a unitary flowtube." Claims 10, 15 each include limitations to "a unitary flowtube having the standard sensor interface."

Claim 10 includes a limitation to the unitary flowtube having upstream and downstream flanges of size N, and a bore of size number (N-A) where A is an integer in the range 1,2.

Claim 15 includes a limitation to the unitary flowtube having upstream and downstream flowtube flanges of size N, and a bore of a size number at least as small as (N-1).

As disclosed in the present application starting at page 10, line 25:

Each of the combinations provided as indicated by an X in FIG. 3 includes a standard vortex sensor interface on the unitary flowtube. This arrangement allows finished manufacture of the vortex flowmeter to be completed by simply assembling one of the unitary flowtube combinations with a vortex sensor assembly that is shaped to fit the standard sensor interface.

Neither Tanimura et al nor Khalifa, taken singly or in combination, teach or suggest "a vortex sensor shaped to fit a standard sensor interface on a unitary flowtube" as presently claimed in Claims 10 and 15. Neither Tanimura et al nor Khalifa, taken singly or in combination, teach or suggest "a unitary flowtube having the standard sensor interface" as presently claimed in Claims 10 and 15.

Neither Tanimura et al nor Khalifa, taken singly or in combination, teach or suggest "upstream and downstream flanges of size N, and a bore of size number (N-A) where A is an integer in the range 1,2" as presently claimed in Claim 10. Neither Tanimura et al nor Khalifa, taken singly or in combination, teach or suggest "upstream and downstream flowtube flanges of size N, and a bore of a size number at least as small as (N-1)" as presently claimed in Claim 15.

Claims 10, 15 thus include numerical limitations to the size number of the flanges in relation to the size numbers of the bores, and the use of a standard sensor interface shared by both the vortex sensor and the unitary flowtube.

The size number of upstream and downstream flanges in relation to size numbers of bores are disclosed in FIG. 3 of the present application. The nominal inside diameters associated with

each of the size numbers are illustrated in FIG. 1 of the present application. As illustrated in an example in FIG. 2, multiple range selections (such as at least ranges 54, 56 for bore sizes 3, 4) provide optional combinations of flow measurement range and power loss. Regardless of the combination selected, the same vortex sensor with standard sensor interface can be used and the same size 5 upstream and downstream flanges can be used to fit the piping system into which the flowmeter is inserted.

Neither Tanimura et al., nor Khalifa, taken singly or in combination, teach or suggest these features. Claims 10-18 are therefore believed to be non-obvious. The limitations of the dependent claims, when taken in combination with the limitations of independent Claims 10, 15 are also believed to be patentable. Reconsideration and allowance of Claims 10-18 are therefore requested.

Claims 14, 19 were rejected under 35 USC 103(a) over Tanimura in view of Khalifa, as applied above, and further in view of Kleven (US 6,658,945).

As argued above, the independent claims 10, 15, from which Claims 14, 19 depend, include limitations that are not taught or suggested by Tanimura et al. or Khalifa. Kleven also does not teach these limitations. Claims 14, 19 include limitations to "a measured calibration with the diameter expanders ... in place stored in the vortex flowmeter." Kleven does not teach or suggest this limitation. Tanimura et al, Khalifa, and Kleven, taken singly or in combination, do not teach or suggest a measured calibration with diameter expanders in place stored in the vortex flowmeter. Claims 14, 19 are thus believed to be patentable. Reconsideration and allowance of Claims 14, 19 are therefore requested.

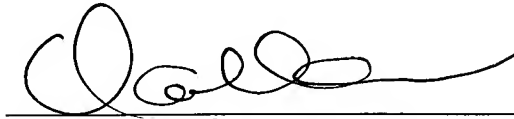
The Application appears to be in condition for allowance and favorable action is requested. The Director is

authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By:

A handwritten signature in black ink, appearing to read 'D. Bohn', written over a horizontal line.

David C. Bohn, Reg. No. 32,015  
Suite 1400 - International Centre  
900 Second Avenue South  
Minneapolis, Minnesota 55402-3319  
Phone: (612) 334-3222 Fax: (612) 334-3312